Anthreptes hypogrammica hypogrammica (S. Müll.).

& Q. Alas Peurba, 15 and 20 September.

3. Alur Djambu, 15 November.

According to Robinson & Kloss (Journ. Str. Br. Roy. As. Soc. 1920, p. 112) Hartert's A. h. intensior from Borneo seems to be of somewhat doubtful status.

Jonkheer van Heurn may be congratulated with his success in collecting three examples of this rare species. To show its rarity in Sumatra, I have only to refer to Robinson & Kloss's words in 'The Ibis,' 1918, p. 592.

Mr. van Heijst collected one specimen in Deli (N.E. Sumatra).

Arachnothera longirostris longirostris (Lath.).

J. Alas Peurba, 14 September.

Arachnothera affinis (Horsf.).

J. Alur Djambu, 11 November.

XXXVI.—Some Cretan Birds. By Brigadier-General H. R. KELHAM, C.B., M.B.O.U.

THESE field-notes were made during the military occupation of Crete in 1897–98, principally in the neighbourhood of Candia, but I also visited Canea and the Alikanu Marsh, lying between that town and the hills, while observations were made during a month spent after ibex among the mountains of Sphakia.

Latterly the disturbed state of the country, owing to the fighting between the Moslems and Christians, rather limited my wanderings.

In Sphakia the scenery was very Himalayan, reminding me of my old hunting grounds in Kashmir, while to make the surroundings even more realistic, a huge Lämmergeyr (*Gypaëtus barbatus*) would often be seen sailing along the hillside.

My bivouac overlooked a deep, boulder-strewn nullah beyond which, five miles away could be seen spread out like a map the elevated plain of Omalos, a huge depression over a mile in diameter, surrounded by high peaks (8000 ft.), while at its southern end a curious outlet led into a deep ravine, then far away north the promontory of Kissimo jutted out into the blue waters of the Mediterranean.

I follow the sequence and nomenclature of the B.O.U. List, 1915.

Turdus merula.

Plentiful in the Sphakia ravines during September, especially near Xiloskala Pass.

Monticola saxatilis.

Among the boulders in Sphakia it was fairly plentiful.

Enanthe cenanthe and Saxicola rubetra were in considerable numbers during the autumn. In my notes is :---"1 Sept., Omalos Plain. It was a lovely fresh morning with quite a bite in the air when I strolled from my tent down to the well, the only one anywhere near, for during the summer water is scarce in the highlands of Crete. The shepherds had utilized dug-out logs as drinking troughs for their cattle, and innumerable little birds assembled morning and evening to quench their thirst and bathe, allowing me to stand within a few paces of them. Most were Wheatears ((Enanthe ananthe), Whinchats (Saxicola rubetra), Stonechats (Saxicola rubicola), and Wagtails, the Wheatears in such numbers, not only at the water but all over the surrounding hills, that I feel sure they were migrants. Plumage of the back pale grey, rusty on the throat and breast, a dark streak through the eye, supercilium and rump white, a black bar across the tail."

Phœnicurus phœnicurus.

I saw several Redstarts near Anapoli in September.

Sylvia atricapilla.

Anapoli during the autumn.

Parus major, also Parus cæruleus, were common among the pines in Sphakia.

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Troglodytes troglodytes.

Common in the boulder-strewn ravines near San Maria, Sphakia.

Motacilla alba.

In flocks on the cultivated fields round Candia in November, where I shot a few specimens. Length 7 in., chin and throat pure white, black-gorged on the breast; forehead, face, and abdomen dull white; outer tail-feathers white, central ones black.

Motacilla flava.

Omalos Plain, in considerable numbers early in September.

Anthus pratensis.

Plentiful round Candia during the winter.

Oriolus oriolus.

Often seen during the autumn.

Lanius excubitor.

On 1 September I shot, what I put down as this species, on Omalos Plain. It had no black patch on its forehead as is the case in the Eastern Shrike.

Hirundo rustica.

I found this Swallow breeding in Crete during June and July.

"Candia, 24 July. To-day I rode out to visit our outpost at Anapoli.

"The tents were pitched in an olive-grove, one shared by the two officers, and in it a pair of Swallows had elected to breed, showing the most extraordinary tameness, for not only had they entered and built their nest against the tentpole but passed in and out within a few inches of my head quite regardless of my presence, in fact, often perching on the table.

"The two young birds were fledged and nearly ready to fly but were being constantly fed by their parents: the occupants of the tent had fixed up an old newspaper round the pole to save them and their kit from the birds' droppings, a very necessary precaution which at first puzzled the birds, but they very soon became accustomed to it. I jotted down the plumage of the male as he sat on the back of a chair within a foot of me: forehead and throat bright chestnut, with a black band just below, underparts white, becoming rusty on the vent, tail very long and forked."

Riparia rupestris.

Seen in September among the highest mountains in Sphakia.

Certhia familiaris.

Several seen near Lakkos at 4000 ft.

Carduelis elegans.

Common throughout the year, breeding in Crete. On 30 August, on Omalos Plain, I saw a fully-fledged family of Goldfinches, able to fly, but still being fed by their parents, in which I could detect no difference of plumage from our English bird.

Coccothraustes coccothraustes.

I saw a Hawfinch in the olive-groves at Anapoli in September.

Fringilla cœlebs.

The Chaffinch is common in Crete, I believe breeding there, but I did not find a nest.

Sturnus vulgaris.

Candia, during the winter.

Pyrrhocorax pyrrhocorax.

While after ibex in the Sphakia mountains I constantly saw the red-billed Choughs, noticeable birds on account of their strange metallic-sounding voice and blown-about flight, like that of a butterfly in a wind.

Garrulus glandarius.

Jays were common among the hills at from 4000 to 6000 feet.

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Corvus cornix.

Seen close to Candia. I saw Ravens driving Hooded Crows away from their feeding-grounds.

Corvus corax.

The Raven is very plentiful in Crete, especially along the coast where, instead of being solitary or in pairs, I noticed that it collected in large flocks, a favourite resort being the waste land just west of Candia, where it shared the filth from the offal heaps with the pariah dogs.

These large gatherings dispersed in the early spring when the birds pair and nest in the rocky ravines along the coast, building on ledges.

I knew of two nests, just north of Anapoli, and obtained a young bird which accompanied me to England, and lived for many years; a most amusing but troublesome pet. It learned to talk and would repeat its name: "Bashi! Poor Bashi, Poor Bashi," in tones of much commiseration.

Plumage, when adult, black with rich metallic blue gloss; irides grey.

Judging by its gregarious habits I at one time thought this Cretan Raven might be *Corvus tingitanus*, but Mr. Sclater informs me such is not the case.

Alauda arvensis.

Plentiful in large flocks on the ploughed land round Candia during the winter; I shot several. Length $7\frac{1}{4}$ in.; outer tail-feathers and outer webs of secondaries white.

Alauda cristata.

Candia, during the winter. A specimen I shot was $7\frac{1}{4}$ in. in length, under surface of the wings and tail rufescent, the short crest had the brown feathers dark-centred. In my notes is:—"15 August: Lark, a crested species, plentiful on the rough land near Candia."

Micropus apus.

Common round Candia, breeding there.

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Micropus melba

I saw several in Sphakia during September, also at Vigla.

Caprimulgus europæus.

The European Nightjar was very plentiful in Crete during the migration.

On 28 September I saw a small party of them, flying low over the sea, arrive from the north-west and settle, very tired, on the battlements of Candia.

Alcedo ispida.

Common, especially at the Amyro Marsh, which I see is sometimes called Halmyros.

Coracias garrula.

Several Rollers seen during September, apparently migrating.

Merops apiaster.

Common during the autumn migrations. I saw a flock near Lakkos on 9 September.

Upupa epops.

The Hoopoe was common in the olive-groves round Candia during September; the earliest date on which I saw it was 16 August.

Gypaëtus barbatus.

The Lämmergeyr, or Bearded Vulture, was common among the mountains of Sphakia, where it undoubtedly breeds.

While scanning the hills for ibex I often used to see this magnificent bird sailing along the mountain-side, following every undulation of the ground apparently without a movement of its long, pointed wings, but if carefully watched through glasses one could detect a slight tilt and a sideways move of its wedge-shaped tail as it altered its course in order to more closely inspect some object on the slopes below.

It is doubtful if the Lämmergeyr actually kills, or whether it confines itself to bodies it may come across.

For several years I studied its habits in the Himalaya, where it was very plentiful, especially among the outer ridges at from 7000 to 8000 feet, but never saw nor even heard of it attacking any living thing, though I often saw it pass close over ibex with young, or herds of goats.

They used to frequent the military slaughter-houses and carry off bones and pieces of offal, sometimes passing within thirty yards of where I stood.

Gyps fulvus.

I saw several Griffon Vultures in Sphakia; also among the hills near Vigla.

Hieraaëtus fasciatus.

On 27 October I shot a Bonelli's Eagle, while in hot pursuit of a wounded Snipe; the pear-shaped streaks on the underparts were very pronounced. A pair frequented the Amyro Marsh, and I saw several among the Cretan mountains.

Circus æruginosus.

I often saw Marsh Harriers quartering the ground at the Amyro Marsh.

Several passed on migration at the end of September.

Buteo ferox.

On 1 October I saw several of these Buzzards apparently migrating; they were being chased and bullied by the Ravens, which is the way they treated all intruders on their domain along the coast.

Accipiter nisus.

Several Sparrow-Hawks were seen near Candia, and on 9 November I noticed one chase right out over the sea and kill a Snipe I had fired at and slightly wounded.

Falco tinnunculus.

Kestrels were plentiful, breeding in Crete.

Phalacrocorax carbo.

Common. On 9 November five were busy fishing close below the battlements of Candia, and I frequently saw them along the coast: one I shot at the end of October had all the upper plumage brown, the feathers light-edged, legs fleshy yellow, length $31\frac{1}{2}$ in., probably a bird of the year, as Col. Meinertzhagen (Ibis, 1921, p. 137) says:—" It breeds on the small rocky islands near Candia."

Ardea cinerea.

Seen in considerable numbers during the autumnal migration.

Ardea purpurea.

On 1 October I saw a long line of Purple Herons flying low over the sea, evidently migrating.

On 13 October I flushed eight out of the Amyro Marsh.

Egretta alba.

I saw one standing in the Amyro Marsh on 12 October.

Mareca penelope.

I shot one in November in the Amyro Marsh.

Anas boschas.

I shot soveral during the winter in Amyro Marsh, but they were not plentiful, nor in fact were any wildfowl, there being few suitable places for them anywhere in the neighbourhood of Candia.

Querquedula crecca.

Fairly common in Amyro Marsh during the winter, but I also saw some there in July, probably breeding.

Nyroca ferina.

Amyro Marsh, during November.

Nyroca nyroca.

I shot a few of these White-eyed Pochard near Candia.

Columba palumbus.

I saw many among the woods on the Sphakia hills.

Columba livia.

Plentiful along the coast. I shot several from the caves overlooking the sea. Very numerous at Standia and Paximadi.

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some Cretan Birds,

Caccabis græca?

Fairly plentiful throughout Crete, especially among the barren ridges near Anapoli: I also found several coveys in the highlands of Sphakia, near Lakkos, and the Omalos Plain.

I celebrated the first of September by working the rocky ground near Anapoli, very rough walking and the heat intense, but I got six brace of these red-legged Partridges, among them four young birds, as big and strong on the wing as their parents. I also shot several near Vigla, Amyro, and Lakkos—in fact, they seemed fairly well distributed throughout Crete.

They were very similar to all the other Red-legged Partridges, but these seemed to be decidedly smaller than the well-known Chukor of the Indian hills.

Coturnix coturnix.

Scarce, I shot a few round Candia, three on 4 December, which points to their being resident.

Rallus aquaticus.

Common in the Amyro Marsh in September and October, as was Porzana maruetta and Gallinula chloropus, the last in considerable numbers.

Fulica atra.

I saw two Coots on a small marsh near Anapoli on 13 November, also a few at Amyro during the winter.

Œdicnemus œdicnemus.

In my notes :----"18 July. Walked to the foot of the low hills five miles west of Candia. On the stony ground along the coast I saw a party of eight Norfolk Plover, and shot two, one being a young bird; on the same ground, on 16 August, I found them in great numbers among the sandhills and shot three, but must have seen over a hundred, many of them this year's birds, so conclude they breed near where I found them, probably in June.

"In those I examined I could see no difference from the Norfolk Plover I have shot in Spain, Morocco, and Malta.

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Charadrius apricarius.

I shot several near Candia during November and December.

Vanellus vanellus.

Shot one out of a huge flock on the low ground near Candia, on 22 November, with them were several Golden Plover : very cold weather and a gale blowing.

Scolopax rusticola.

Fairly plentiful in November, especially after stormy weather, in the wooded gullies running down to the sea a few miles west of Candia; I have known from eight to twelve shot in a day.

During December several were shot near Pachides.

Gallinago gallinago.

Common during the winter. I shot many in Amyro Marsh.

The best "bag" I know of was 16 couple in Alikanu Marsh, near Canea. Snipe-shooting in Crete during the fighting between the Moslems and so-called Christians was not all joy.

One November afternoon I was shooting a small marsh, situated between the opposing forces. The Christians were holding the opposite hills, some 1200 yards beyond the marsh. I had shot a few Snipe, when "phutt" came a bullet into the mud, then another, so, though the range was long and the shooting bad, I thought it was time to move. Later on I revisited the marsh, getting four couple of Snipe and two Teal, but took with me my soldierservant, who waded fifty yards behind me carrying a Union Jack on a long stick, to let the Christians know I was a long-lost brother, not a wearer of the fez, but I doubt if Snipe have often been pursued under such peculiar circumstances.

Amyro (or Halmyros) Marsh was the best place near Candia for Snipe and Waders : at its head a limestone cliff rose abruptly from a very deep pcol of blue-green water,

some Cretan Birds.

Limnocryptes gallinula.

Jack Snipe were fairly plentiful during the winter : on one occasion I shot eight.

Totanus ochropus.

Common along the coast, as was Totanus totanus.

Numenius arquata.

Very plentiful during the winter on the sandhills along the coast.

Numenius phæopus.

I failed to identify the Whimbrel, but the late Sir Herbert Chermside, at that time British Commissioner in Crete, assured me that he had seen it there, also that during April a specimen of the Spur-winged Plover (*Hoplopterus spinosus*) had been shot near Candia; being a naturalist and a sportsman he was probably correct.

Sterna hirundo.

"Candia, 27 September. On the edge of a shallow overflow of the sea I to-day flushed a large flock of these Tern, and with them a few very small ones, with black markings on their face, probably *Sterna minuta*."

Larus argentatus.

"Candia, 13 October. To-day while sailing along the coast I passed through flocks of the Mediterranean Herring-Gull, so close that I noted their plumage: the irides were straw-colour, beak and legs yellow, the former with a red blotch on the lower mandible.

"Another species, about 23 in. in length, had dark brown irides, beak black, legs flesh-colour, plumage white mottled with dark brown, broad terminal band of brown across the tail, inner webs of primaries and tips of secondaries white, but the Gulls, with their many changes of plumage, are difficult to identify."

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Pelecanus onocratalus.

Only once met with in Crete.

"Candia, 2 December. A beautifully calm day, and sitting majestically on the smooth sea, five huge white Pelicans came slowly swimming under the battlements.

"An hour later one of my men came to tell me that one of the Pelicans had drifted ashore, and that they had it in the barrack-room; I found its captors drying it in front of a fire, and trying to feed it from a half-opened tin of sardines from the Canteen, their great man on birds having told them that Pelicans fed on fish.

"Needless to say the bird died; it measured nearly 10 ft. across the wings; primaries black with white shafts, wingcoverts and the scapulars dark brown, with chestnut-brown tips to the feathers, back, head and underparts nearly white, legs olive-black. I think it was an immature bird."

Puffinus kuhli.

This species, also *Puffinus yellouan*, were common along the coast. I did not find a nest, but the following experience of their breeding, also of *Thalassidroma pelagica*, on the Island of Filfla, a few miles south of Malta, may be of interest.

"Malta, 9 May, 1875. Visited Filfla, and found many nests of the Cinereous Shearwater (*Puffinus kuhli*), if a slight depression in the ground under boulders can be so named.

"Their first laying must be early, as every nest contained a young bird of from one to three weeks old.

"During the day the Shearwaters retire into holes and crevices among the rocks, issuing forth late in the afternoon to feed; I caught two but set them free, and noticed that owing to their length of wing they had difficulty in rising from level ground and ran to the edge of the cliff, then launched themselves into the air.

"On 11 July I revisited Filfla, and found any number of nests containing eggs, but nearly all were incubated, though

I obtained a few good specimens fairly fresh; on this occasion I was apparently a little late for the second laying. The one large white egg, measuring $2\cdot 8$ in. by 2 in., was laid on the bare soil among the debris of boulders fallen from the cliffs and, as a rule, within a few yards of the sea.

"While sitting, the old birds uttered a loud, hoarse croak, which disclosed their whereabouts, but if incautiously handled, they gave a severe bite. They also vomited a nasty green oil with which the rocks were much stained and which had a peculiar, strong musky odour, as also had the birds and their eggs.

"I saw several specimens of *Puffinus yelkouan*, but failed to find a nest on Filfla, but obtained eggs from the cliffs near Sclendi, in Gozo, at the end of April where, at the same time, there were any number of eggs of the Mediterranean Herring-Gull, *Larus argentatus*, the nests being on ledges along the precipitous cliffs.

"On Filfla on 22 June, the Shearwaters' nests mostly contained a freshly-laid egg, only a few being near hatching."

Thalassidroma pelagica.

"Malta, 1875. On 11 July, while clambering over the boulders at the foot of the Filffa cliffs, a faint cry came from under the rocks, and quite a foot underground I found a burrow in which sat a Petrel, disclosing an egg as it crawled away squeaking; the egg was white with a ring of faint purple-brown freckles at one end; it measured 1.2 in. by .75 in."

In the following summer I again visited Filfla, and found nests with eggs of this Petrel during the last week in June; the old birds let me lift them off their egg, but squeaked loudly, and vomited a green oil similar to the filth oxuded by the Shearwaters.